

Applicant : Michael A. Porter
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Attorney's Docket No.: 10790-067001

Remarks

Claims 1-14, 20, and 41-47 are pending. Claims 15-19 and 21-40 have been withdrawn.

§102 Rejections

Claims 1-14, 20, 41, and 45-47 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Lawhon, U.S. Patent No. 4,420,425 ("Lawhon").

Claims 1-14, 20, 41-42, and 45-47 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Muralidhara et al., U.S. Patent No. 6,630,195 ("Muralidhara").

Claims 1-14, 20, 41-42, and 44-47 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Stark et al., U.S. Patent No. 6,599,556 ("Stark").

Claims 1-14, 41-42, and 44-47

Lawhon discusses a method of producing proteins from oilseeds that includes extraction and filtration. Muralidhara discusses a process for producing oilseed protein products that includes extraction, membrane filtration, and drying. Stark discusses protein supplemented confectionary compositions and also discusses a process for producing oilseed protein products that includes extraction, filtration, and drying.

The Examiner takes the position that the material of Lawhon, Muralidhara, and Stark would inherently possess the attributes set forth in Applicant's claims. However, inherency requires that the oilseed products in the listed references necessarily and unequivocally have all of the properties recited in Applicant's claims. These references do not satisfy this requirement. This is because the process conditions used to produce the materials will affect the properties of the resulting materials.

Regarding Lawhon, the reference does not describe the process conditions used to produce the isolate, including temperature, pH, amount of membrane fouling, pressure used to conduct the separation, and the like, in sufficient detail to allow a person of ordinary skill to determine unequivocally and unambiguously whether the resulting soy isolates do, in fact,

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consistently have the properties recited in Applicant's claims. To illustrate this point, compare Example 1 in Lawhon with Example 3, which repeats the process of Example 1 "using the same materials under approximately the same process conditions." As shown in Table 5 of Lawhon, processes conducted under "approximately the same process conditions" nevertheless had a different % solids extracted from the feedstock (62.9% vs. 67.2%). Other differences included membrane performance, such as % ash retained (37.1% vs. 57.2%), total sugars (24.6% vs. 29.4%), and nonprotein nitrogen (30.1% vs. 51.5%). Thus, even processes conducted under "approximately the same process conditions" using the same equipment are substantially different in various aspects. Those differences manifest themselves in soy isolates having different properties.

Based upon the scant information provided in Lawhon relating to process conditions, a person of ordinary skill simply cannot reproduce accurately the process used in Lawhon to determine with any reasonable degree of confidence whether the resulting soy isolates necessarily have all of the properties recited in Applicant's claims. This is underscored by the fact that even processes that allegedly are approximately the same do, in fact, display substantial variability. Therefore, Lawhon does not satisfy the standards for establishing inherency, i.e., that the soy isolates described in Lawhon necessarily have all the properties recited in Applicant's claims.

Similarly, in Stark, Examples 1-4 were run under comparable processing conditions to each other, with slight variations in the process. As shown in Tables 1, 3, 4, 7, 10, and 11-12, the properties of the resulting soy isolates varied in their properties.

For the same reasons discussed above regarding Lawhon, the information provided regarding the processes used in Stark is insufficient for one of ordinary skill in the art to determine with any reasonable degree of confidence whether the resulting soy isolates necessarily have all of the properties recited in Applicant's claims. This is underscored by the fact that even similar processes, in fact, display substantial variability. Therefore, Stark also does not satisfy the standards for establishing inherency, i.e., that the soy isolates described necessarily have all the properties recited in Applicant's claims.

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Lastly, Muralidhara (which, like the present application is assigned to Cargill, Incorporated), describes processing conditions used prior to the present application. In general, the properties of a modified oilseed material depend upon the various conditions used to process the material. However, the processing conditions described in Muralidhara do not produce oilseed materials as claimed. Specifically, the products produced under Muralidhara's conditions do not have the gel strength that claims 1, 4, 41, and 45 require, the dispersion viscosity that claim 2 requires, or the ESI that claim 3 requires.

For example, although Muralidhara discusses gels (see Example 10), the gels produced are weak (see col. 26, lines 31-42), having a gel break strength around 20 g. In contrast, the current application claims modified oilseed material having a gel breaking strength greater than 0.5N.

This can also be seen in the current application in Tables 10 and 11. According to the inventor, Examples 10.9, 10.17, and 10.27 are representative of oilseed materials processed according to the process described in Muralidhara. As shown in Tables 10 and 11, these materials have the following properties:

| | Gel Strength | Dispersion Viscosity | ESI |
|---------------|--------------|----------------------|------|
| Example 10.9 | 0.274 | 0.307 | 78 |
| Example 10.17 | 0.430 | 0.328 | 81 |
| Example 10.27 | 0.287 | 0.405 | 80.5 |

As demonstrated, materials produced using processes as described in Muralidhara do not have the properties recited in Applicant's claims. Muralidhara, therefore, does not anticipate the claims.

As the cited references do not satisfy the standards for anticipation and inherency, the rejection of claims 1-14, 41-42, and 44-47 should be withdrawn.

Claim 20

Lawhon does not describe or teach a pasteurization step, rather the product produced may be provided either directly as a liquid, or in a spray dried form. (col. 12, lines 19-26 and Fig. 1).

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Stark describes a HTST treatment, wherein the retentate is raised to a temperature of 80-85°C (176-185°F) (col. 10, lines 8-30). This treatment has been "found to very effective at destroying bacteria." (col. 10, lines 28-30). The same process is described in Muralidhara, with the same 80-85°C temperature.

These temperatures are below the temperatures achieved by the pasteurization treatment described in the present application, and as claimed in claim 20, which recites a temperature of 200-250°F, greater than the temperature of the HTST treatment of Stark and Muralidhara. There is no teaching or suggestion in Stark or Muralidhara that a higher temperature would be desirable. Furthermore, as the HTST treatment of Stark and Muralidhara is "very effective", one of skill in the art would not be motivated to increase the temperature.

Therefore, claim 20 is novel and non-obvious over the references Lawhon, Stark, and Muralidhara, whether taken alone or in combination. Applicant requests that this rejection be withdrawn.

§103 Rejections

Claims 42-44 have been variously rejected under 35 U.S.C. § 103(a) in view of Lawhon, Stark, or Muralidhara, in combination with Altemueller et al., U.S. Patent No. 6,423,364 ("Altemueller") or Porter, U.S. Patent No. 6,841,184 ("Porter").

The fact that Lawhon, Stark, and Muralidhara fail to describe oilseed materials having properties recited in the pending claims also precludes §103 rejections based upon those references in combination with any of the secondary references.

This rejection, therefore, should also be withdrawn.

Double Patenting Rejections

Claims 1-8, 20, 41-47 have been provisionally rejected for nonstatutory obviousness-type double patenting over various claims and combinations of co-pending application 10/432,094 (claims 1-8, 10-16, ad 19-43), US Patent 6,423,364, U.S. Patent 6,841,184 (claims 1-29), and U.S. Patent 6,830,773 (claims 1-21).

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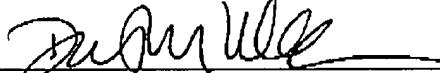
None of the claims of the above listed references claim a gel strength, ESI, or dispersion velocity, as recited in the present claims, nor the method of heating the protein-enriched retentate. Furthermore, none of the references teach materials that meet those claims (as discussed in greater detail above). For the reasons discussed, the differences are not merely obvious variations of earlier claims.

Therefore, Applicant requests reconsideration and withdrawal of these provisional rejections.

If it would be helpful in advancing prosecution, the Examiner is invited to contact the undersigned at the listed number. This response is also being filed together with a petition for a one month extension of time and appropriate fee. No other fees are believed to be due. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 5/11/06



Dorothy P. Whelan
Reg. No. 33,814

Fish & Richardson P.C.
60 South Sixth Street
Suite 3300
Minneapolis, MN 55402
Telephone: (612) 335-5070
Facsimile: (612) 288-9696

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